

## Chapter 3

# Culture History Overview

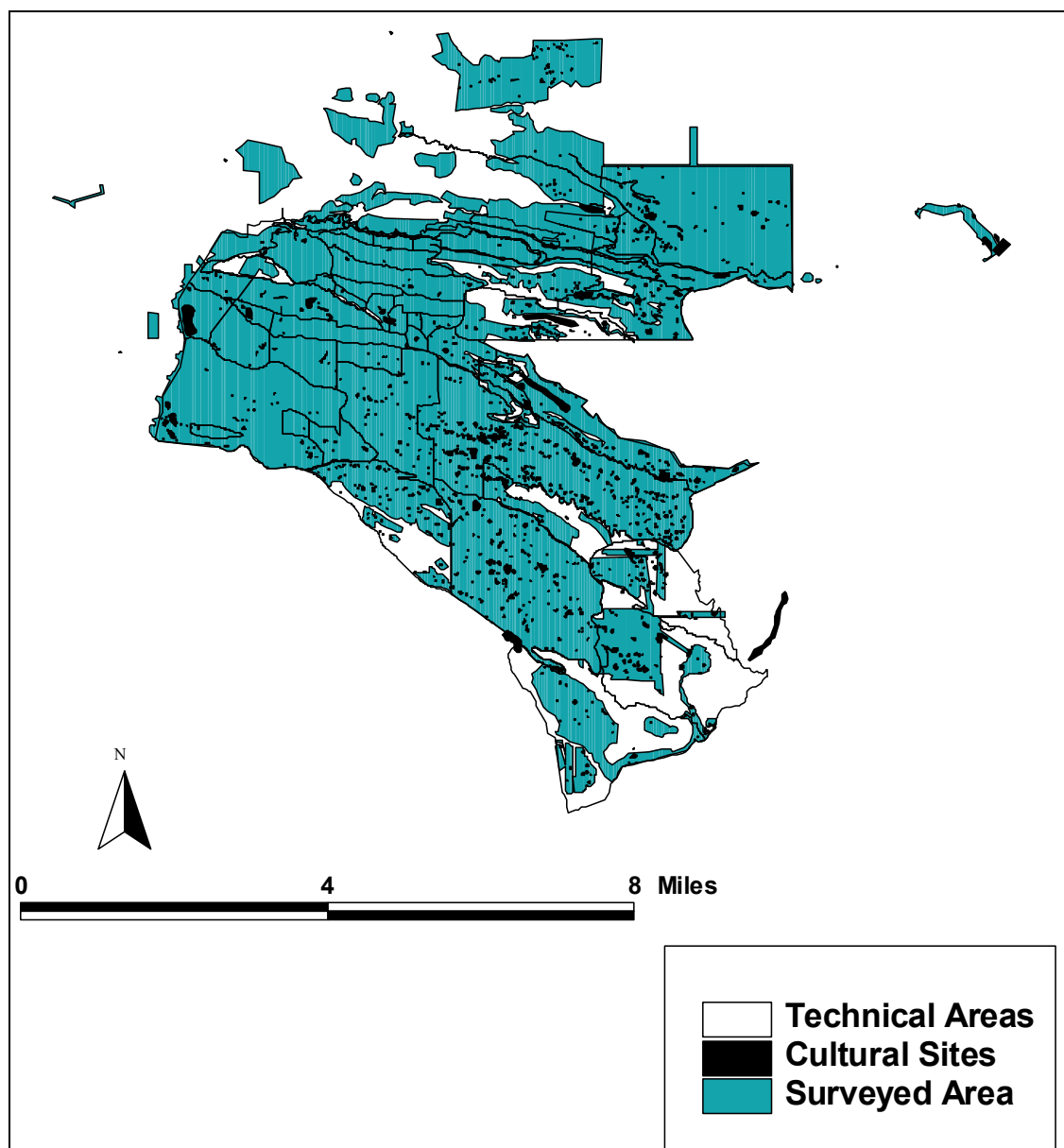
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Cordell (1979a, 1979b, 1984, 1997), Stuart and Gauthier (1981), and, most recently, Riley (1995) have all presented the regional culture histories for northern New Mexico in general, and the Pajarito Plateau specifically. Occupation and use of the Plateau began as early as 10,000 BC, as hunter-gatherer groups used the area for hunting large game animals. The chronological sequence associated with the culture history for the northern Rio Grande was first developed by Wendorf (1954) and later modified by Wendorf and Reed (1955). Table 3.1 illustrates the regional chronologies as defined by Cordell (1979a), Irwin-Williams (1973), and Wendorf and Reed (1955). What follows is a brief outline summarizing each cultural time period, as it is understood for the central portion of the Pajarito Plateau.

It is noted that a slightly modified version of this chronology is applied to the area due to the nature and timing of homesteading on the Plateau, and especially due to the development of LANL. The “Homestead Period” is used to define a period of time from the 1890s to 1942. The Recent Period is subdivided into the “Manhattan Project Period” (1943 to 1946), the “Early Cold War Period” (1946 to 1956), and the “Late Cold War Period” (1956 to 1990). The distribution of all archaeological survey areas and recorded archaeological sites at LANL (as of July 2002) are depicted on Figure 3.1.

**Table 3.1.** Culture Historical Chronology for the Northern Rio Grande

| Culture                                      | Period                    | Dates              |
|--|---------------------------|--------------------|
| Paleoindian                                  | Clovis                    | 9500 to 9000 BC    |
|  | Folsom                    | 9000 to 8000 BC    |
|  | Late Paleoindian          | 8000 to 5500 BC    |
| Archaic                                      | Jay                       | 5500 to 4800 BC    |
|  | Bajada                    | 4800 to 3200 BC    |
|  | San Jose                  | 3200 to 1800 BC    |
|  | Armijo                    | 1800 to 800 BC     |
|  | En Medio                  | 800 BC to AD 400   |
|  | Trujillo                  | AD 400 to 600      |
| Ancestral Pueblo                             | Early Developmental       | AD 600 to 900      |
|  | Late Developmental        | AD 900 to 1200     |
|  | Coalition                 | AD 1200 to 1325    |
|  | Classic                   | AD 1325 to 1600    |
| Native American, Hispanic, and Euro-American | Spanish Colonial          | AD 1600 to 1821    |
|  | Mexican                   | AD 1821 to 1846    |
|  | United States Territorial | AD 1846 to 1912    |
|  | Statehood to World War II | AD 1912 to 1945    |
|  | Recent                    | AD 1945 to present |



**Figure 3.1.** Distribution of cultural resources and survey areas at LANL.

## THE CULTURAL SEQUENCE OF THE PAJARITO PLATEAU

### *Paleoindian Period: 9500 BC to 5500 BC*

During this early time period, small groups of highly mobile Paleoindian hunter-gatherer populations may have followed bison herds up and down the Rio Grande, making frequent trips onto the Pajarito Plateau where they were able to procure obsidian and a variety of subsistence resources. The time period is represented on LANL lands by a single Folsom point identified by Steen (1977:7) on a mesa north of Ancho Canyon. Clovis, Folsom, and Planview points have also been found at other locations on the Plateau (Acklen 1993, 1997; Lent et al. 1986; Traylor et al. 1990; Wiseman 1992). Obsidian procured

from Jemez Mountains sources has been found on Paleoindian sites located as far away as northern Colorado (Wilmsen 1974:114).

### ***Archaic Period: 5500 BC to AD 600***

Archaic hunter-gatherer groups relied on a wide variety of small game and plant species, while hunting primarily with the spear and atlatl. The piñon-juniper woodlands on LANL land contain evidence of the temporary campsites left behind by these groups as they moved across the landscape. Remains representing these campsites are in the form of lithic scatters, consisting of obsidian tools, chipping debris, and diagnostic projectile points (e.g., Baker and Winter 1981; Biella 1992; Moore et al. 1998). These sites presumably reflect the seasonal use of upland settings during the fall months for pine nut collecting, hunting, and lithic procurement activities. Winter sites with makeshift structures have been excavated at lower elevations near the Otowi site, along the Rio Grande (Lent 1991), and at the Abiquiu Reservoir (Stiger 1986).

Changes to northern Rio Grande subsistence strategies have been documented during the Late Archaic period. Although foraging continues to be an important component of the subsistence system, maize and other cultigens are incorporated into the diet at this time. Maize from Jemez Cave, located near the Soda Dam along State Road 4, has been directly dated to 2440±250 BP (uncorrected; M-466; Crane and Griffen 1958) and 2410±360 BP (Austin Long cited in Ford 1985:350). Although cultigens did not become the dominant food resource for quite some time, the introduction of domesticates into the area had a profound effect on the inhabitants of the Pajarito Plateau.

### ***Developmental Period: AD 600 to 1200***

In the northern Rio Grande, maize horticulturists lived first in semi-subterranean pit structures and then in adobe surface structures. They began to make painted pottery with simple designs (e.g., Lino Gray, Kwahe'e Black-on-white, and Kana'a Gray), and continued to pursue hunting and gathering relying on the bow and arrow. Most habitation sites dating to this time period are located at lower elevations near the Rio Grande, although the Plateau certainly continued to be used on a seasonal basis.

There is minimal evidence for the presence of occupation during this time period on the Plateau or on LANL lands. As part of the Cochiti Reservoir Project, two Developmental sites were excavated (LA 6461 and LA 6462), these are interpreted as single household winter residences, although there is some evidence of year-round habitation (Biella and Chapman 1977, 1979; Lange 1968).

LA 82601 is located on the southeastern side of the Jemez Mountains in Water Canyon; the site is one of the few Developmental period sites subject to testing on the Plateau. LA 82601 has been dated to the later portion of the period (AD 1125 to 1225) based on the presence of nine Kwahe'e Black-on-white ceramics (a mineral painted pottery) (Acklen 1993:301; 1997:58). While there are several other pit structures, or potential pit structures, on the Plateau that may date to the Developmental period, there is no substantial evidence for this time period due to a lack of clearly defined archaeological remains.

The lack of recorded Developmental period sites may be indicative of a depopulation of the Plateau at this time. Fluctuations in population size and periods of aggregation are quite common throughout many areas of the desert borderlands (Cordell 1984, 1997; Cordell et al. 1994; Crown 1991; Crown and Kohler 1994; Fish et al. 1993; Kent 1989; Nelson 1999; Nisengard n.d.; Preucel 1987).

***Coalition Period: AD 1200 to 1325***

During the Coalition period there was a substantial increase in the number, size, and distribution of aboveground habitation sites, with year-round settlements expanding into upland areas on the Pajarito Plateau. A long-term process of site aggregation begins at this time, with early sites containing adobe and masonry rectangular structures with 10 to 20 rooms. The remains of these sites are present in the small mounds of shaped tuff blocks and dense artifact scatters commonly found throughout LANL. In contrast, later sites of this period consist of large masonry plaza pueblos that contain more than 100 rooms. Figure 3.2 provides illustrations of a Coalition period roomblock and a Classic period plaza pueblo.

The construction of agricultural features, including terraces, gravel mulch gardens, and dams, associated with these sites suggests an even greater reliance on horticulture than previously evidenced in the region. Most researchers attribute the increase in site density to population migration (Cordell 1979b, Hill and Trierweiler 1986; Hill et al. 1996; Wendorf and Reed 1955), others see the rise in site numbers as a result of local population growth (Steen 1982); it is likely that the increase is the result of a combination of both of these factors. In terms of artifacts, the beginning of the Coalition period coincides with a shift from mineral to organic painted pottery, including Santa Fe Black-on-white, the most prolific ceramic type associated with the Coalition period. Ceramic cooking and storage vessels are produced using a smeared-indented corrugated style.

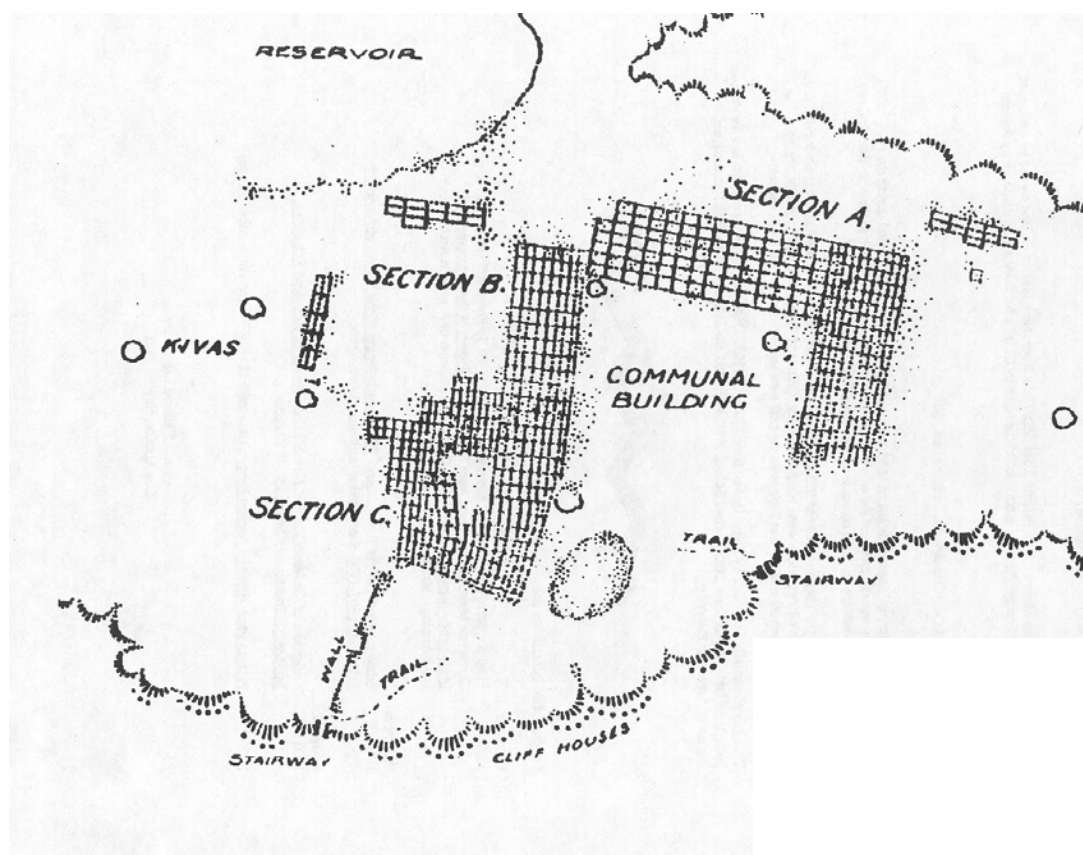
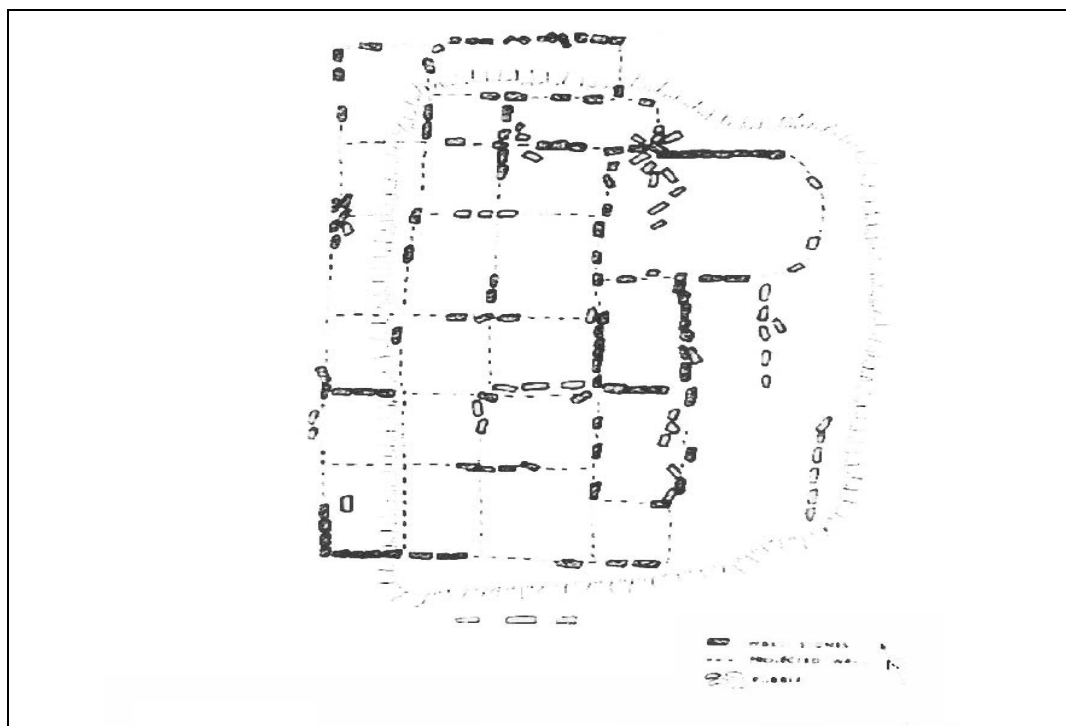
***Classic Period: AD 1325 to 1600***

The Classic period is characterized by intensive maize agriculture. Ancestral Pueblo settlements on the Pajarito Plateau became increasingly aggregated into three large population clusters with associated outlying one- to two-room fieldhouses. The central site cluster consists of four temporally overlapping sites: Tsirege, Navawi, Tsankawi, and Otowi pueblos (Hoagland et al. 2000). Mera (1935) suggested that the initial occupation of these pueblos occurred during the 14<sup>th</sup> century. Tsirege, Tsankawi, and Otowi continued to be occupied during the 15<sup>th</sup> century, with only Tsirege and Tsankawi remaining occupied by the beginning of the 16<sup>th</sup> century. Oral traditions from the contemporary Pueblo of San Ildefonso indicate that Tsankawi was the last of the Pajarito Plateau pueblos to be abandoned.

The introduction of glaze-painted ceramics to the south of Frijoles Canyon and the production of biscuitwares in the northern Rio Grande area mark the beginning of the Classic period. Biscuitwares include a temporal sequence from Biscuit A (Abiquiu Black-on-gray), Biscuit B (Bandelier Black-on-gray), to Biscuit C (Cuyamungue Black-on-tan). Sankawi Black-on-cream, Potsuwi'i Incised, and plainware cooking vessels are also produced during this time period; the latter utility pottery includes micaceous types. This central group of four Classic period communities is ancestral to the Tewa speakers of San Ildefonso Pueblo.

***Spanish Colonial Period: AD 1600 to 1821***

Due to a series of droughts, the Pajarito Plateau was eventually abandoned as a residential area during the mid-1500s. At this time, new pueblos were constructed and occupied along the Rio Grande Valley. Although the historic period begins with Coronado's exploratory expedition up the Rio Grande in 1540-1541, most researchers date the period beginning in AD 1600. This date corresponds with Oñate's settlement in New Mexico and imposition of the Spanish encomienda/estancia system into Rio Grande communities (Riley 1995). At this time, the Spanish enforced strict controls on Pueblo pottery production and began to require the manufacture of European vessel forms and "taxation jars." These jars were very



**Figure 3.2.** Site sketches of a Coalition period site (above) and a Classic period site (below).

large in size to provide specific volumes for grain taxation. The style of the jars often exhibited a distinctive shoulder at the mid-point of the vessel, which facilitated transport of the vessels. Historic ceramic types include Tewa Polychrome, Kapo Gray or Black, and Ogapoge Polychrome. In 1680, the Pueblo Indians revolted against the Spanish, at this time, several Ancestral Pueblo sites situated on the topographically isolated and elevated Pajarito Plateau were reoccupied, as they offered natural protection and defense for groups of refugees.

With the conquest and resettlement of this area by de Vargas (1693 to 1696), the economic and settlement systems of the pueblos were completely overhauled and revamped (Simmons 1969). The large mission communities, characteristic of the earlier time period, disappeared, as did the estancias of the encomienderos. Instead, lands were granted to dozens of Hispanic families and other individuals who had worked the lands during previous years. Hundreds of these small land holdings were scattered throughout the Rio Arriba and Rio Abajo areas.

Athabaskan groups from northern and western areas have occupied portions of northwestern New Mexico since the 15<sup>th</sup> century; however, ethnohistorical evidence for Navajos and Jicarilla Apaches in the northern Rio Grande begins with the Spanish Colonial period (Forbes 1960; Friedlander and Pinyan 1980; Marshall 1995; Marshall and Hogan 1991; Opler 1936, 1971; Tiller 1992). The Navajo primarily resided in the Gobernador region, but made periodic visits to the Rio Grande Valley and Jemez Mountains. The presence of Tewa Polychrome and Jemez obsidian at Pueblito sites attests to these trips and ties to the region. Some Jicarilla groups wintered in the area of Abiquiu and made seasonal hunting and gathering trips to the nearby Jemez Mountains.

Two rock rings, that may represent the remains of an Athabaskan tipi or wickiup, were recorded in Rendija Canyon (Peterson and Nightengale 1993). Test excavations at this site identified the presence of a hearth inside one of the structures, which yielded a radiocarbon date of  $130 \pm 60$  BP (Beta-58428). This reflects a calibrated date for the feature within the 18<sup>th</sup> or 19<sup>th</sup> centuries. A single obsidian flake was the only artifact recovered from the site. Several possible Jicarilla rock ring sites with associated micaceous pottery have been reported for the Rio del Oso valley near Española (Anschuetz personal communication 1999) and at Pecos National Monument (Gunnerson and Gunnerson 1970; Schaasfma 1977, 1992). The presence of these sites may suggest a Navajo affiliation for Piedra Lumbre sites in the Abiquiu area, although some researchers suggest that some of these sites are associated with local Tewa peoples (Carrillo 1992).

### ***Mexican Period: 1821 to 1846***

Mexico declared its independence from Spain in 1821, which brought about a more lenient land grant policy and an expansion of existing trade networks (Levine et al. 1985). Trade between Missouri and Santa Fe along the Santa Fe Trail began soon after independence and dominated many of the events in the area for the next quarter-century (Connor and Skaggs 1977). Increased trade brought many comparatively inexpensive Euro-American goods into the northern Rio Grande region, a fact that is reflected in the increase of manufactured items identified at sites dating to this period (Moore 1993).

### ***United States Territorial: 1846 to 1912***

The lands that eventually came to be New Mexico remained a part of Mexico until the United States – Mexican war began in the mid-1800s. Troops led by Colonel Stephen W. Kearny raised the American flag in Santa Fe and took possession of these lands for the United States on August 18, 1846. Grazing and seasonal use of the Pajarito Plateau by non-Indians was common during the early historic period, and the

first homesteads were established on the Plateau during the early 1880s (Scurlock 1981:138). New Mexico was provided with a territorial government in 1850, and it remained a territory until being granted statehood in 1912.

### ***Statehood To World War II Period: 1912 to 1945***

During the early 1900s, New Mexico saw a continuation of traditional farming strategies, cattle grazing, timbering, and a wide variety of cultural practices. Seasonal homesteading continued to be prevalent on the Plateau, though the area was primarily used in addition to established year-round residences. Wooden cabins and corral structures as well as rock or concrete cisterns characterize Hispanic and Anglo Homestead Era sites. Artifact scatters, consisting of historic debris associated with household and farming/grazing activities, are also commonly found at this time period. In discussing the homestead occupation of current LANL lands in this report, it is noted that nearly all of the evidence for homesteading dates between 1912 and 1945, this is likely a reflection of changes relating to both the Enlarged Homestead Act of 1909 and the Grazing Homestead Act of 1916 (Scurlock 1981). Increases in the use of railroad and automobile transportation allowed for an increase in commerce and tourism; by the 1940s, New Mexicans began to leave rural villages for opportunities in larger cities, both in and out of the state (Simmons 1993:182).

In 1942, Franklin D. Roosevelt gave his approval for the development of the world's first atomic bomb. The geographic and topographic isolation of the Pajarito Plateau that had been a benefit to Ancestral Pueblo peoples during the Pueblo Revolt was attractive to project developers, and Los Alamos, New Mexico, was selected as the site for design and construction of the atomic bomb. The project came to be known as Project Y, which was a subset of the Manhattan Project. The creation of a modern town in Los Alamos impacted and influenced surrounding northern Rio Grande communities. Lands previously owned by the Los Alamos Ranch School and a majority of Hispanic homesteaders, as well as those used seasonally by Native American populations still occupying the region, were appropriated for use in the Manhattan Project in 1942. Project Y effectively ended the homesteading era on the Pajarito Plateau (LANL 1997).

**Homestead Period: 1890s to 1942.** As previously noted, those portions of the U.S. Territorial and Statehood to World War II periods during which homesteading was known to have existed on the Pajarito Plateau are collectively referred to as the Homestead Period. Based on a review of historic documents and on dendrochronological dating of homestead features, the Homestead Period in the central Pajarito Plateau likely begins in the early or middle 1890s, and at the latest by 1899. Foxx and Tierney (1999:8) indicate that the first patented homesteads on the Pajarito Plateau were established in 1893.

Most of the central Pajarito Plateau homestead patents seemingly were filed by Hispanic peoples who maintained permanent homes in the Rio Grande Valley, using the Pajarito Plateau sites for seasonal farming and resource gathering (Foxx and Tierney 1999). Notable exceptions to this pattern included the establishment of a few permanent Anglo homesteads such as the Anchor Ranch and the creation of the Los Alamos Ranch School, the latter of which was in operation from 1918 until the late spring of 1943.

The end of the Homestead period coincides with the appropriation of lands on the Pajarito Plateau for the Manhattan Project in 1942–1943.

### ***Recent Period: 1945 To Present***

The Recent Period is defined as beginning with the end of World War II and continuing until present times. Because of the vital importance of the Manhattan Project and Cold War to the history of LANL and for the central Pajarito Plateau, these are here treated as distinct historical periods (McGehee and Garcia 1999:11–16).

**Manhattan Project Period: 1942 to 1946.** The Manhattan Project Period for LANL and for the central Pajarito Plateau officially began with the closure of the Los Alamos Ranch School after the end of the graduating class of 1943, which had an accelerated graduation in February (the school was officially notified of the upcoming forced closure on December 7, 1942). At the same time, additional lands were secured from government agencies, such as the Forest Service, and from the predominantly Hispanic homesteaders. Construction of Project Y immediately began at the Los Alamos site (Hawkins et al. 1983).

The atomic age was ushered in with the detonation of the first atomic bomb at the Trinity test site on the Alamogordo Bombing and Gunnery Range on July 16, 1945. The explosion of “Little Boy” rapidly followed; on August 6, 1945, this uranium “gun” device was exploded over the Japanese city of Hiroshima. The subsequent explosion of the “Fat Man” plutonium “implosion” device over Nagasaki on August 9, 1945, led to the official surrender of Japan on August 14, 1945.

During the period between the surrender of Japan and the middle of 1946, Project Y was downsized, with many Los Alamos scientists returning to their pre-Manhattan Project academic jobs. The primary mission of the Laboratory at that point became that of the stockpiling and the development of additional atomic weapons.

The Manhattan Project officially came to an end at Los Alamos with the beginning of the atmospheric testing program in the Pacific (referred to as “Operation Crossroads”) and the development of the civilian U.S. Atomic Energy Commission (AEC). The AEC officially took over the operation of the Los Alamos site in 1947.

**Early Cold War Period: 1946 to 1956.** The AEC made a commitment to retain Los Alamos as a permanent weapons facility. Research at the Laboratory during the period of 1946 to 1956 focused on the development of advanced fission weapons. In 1952, the first thermonuclear device was detonated at Eniwetok atoll in the Pacific. Other key research themes at Los Alamos during the Manhattan Project/Early Cold War period included supercomputing, biomedical and health physics research, explosives research and development, early reactor technology, pioneering physics research, and the development of high-speed photography.

**Late Cold War Period: 1956 to 1990.** The Early Cold War Period at Los Alamos ends around 1956, a date that marks the completion of all fundamental nuclear weapons design at the Laboratory. In 1957, the gates into the Los Alamos townsite came down, thus ending the 14-year status of the Los Alamos Atomic Energy Community as a closed facility. In 1961, the tensions of the Cold War were exacerbated by the sealing of the border between East and West Germany in preparation for the construction of the Berlin Wall. After 1964, the Laboratory research focused on the engineering of nuclear weapons to fit specific delivery systems. Many significant historical events occurred over the four decades of the Late Cold War period, including important research at Los Alamos. The Cold War is thought of as coming to its end around 1990. This represents the period between the 1989 opening of the borders between East and West Germany and the subsequent tearing down of the Berlin Wall, and that of the 1991 creation of the Commonwealth of Independent States in the former Soviet Union and the signing of the Strategic Arms Reduction Treaty (START) that began the process of reducing the size of strategic nuclear arsenals in Russia and the United States.